

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

Initial Study - Part 2

ENVIRONMENTAL CHECKLIST FORM

Project title: Pilot Study of Evaluation of Enhanced In Situ Bioremediation of Volatile Organic Compounds (VOCs) in Groundwater in the Rho-Chem Facility

Lead agency name and address: Regional Water Quality Control Board, Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Lead Agency Contact person and phone number: David Koo
(213) 620-6155

Project location: 425 Isis Avenue
Inglewood, California

Discharger's name and address: Brian Mastin
CEMEX, Inc. (CEMEX)
3990 E. Concourse Street, Suite 200
Ontario, California 91764
(909) 239-7451

General plan designation: AMEC Geomatrix, 2010, Pilot Study Work Plan for Evaluation of Enhanced In Situ Bioremediation of Volatile Organic Compounds in Groundwater, Rho-Chem Facility, Inglewood, California, August 9.

Zoning: Industrial/Commercial

Description of project: Pursuant to the Corrective Action Consent Agreement between the California Department of Toxic Substances Control (DTSC) and CEMEX (on behalf of the Respondents Responsible parties), CEMEX is proposing the implementation of an in situ bioremediation pilot study to address shallow groundwater impacts at the Rho-Chem facility (site) located at 425 Isis Avenue, Inglewood, California. To conduct the pilot study, CEMEX must obtain waste discharge requirements under California Water Code section 13263 from the Regional Water Quality Control Board, Los Angeles Region (Regional Board). The project for purposes of CEQA is the adoption of the waste discharge requirements authorizing the pilot study and expansion to full-scale if the pilot study proves effective. The pilot study will include the injection of a carbon substrate and a bioaugmentation culture composed of non-pathogenic (naturally derived, not genetically engineered) chlorinated ethene-degrading *Dehalococcoides* ethenogenes culture (referred to as SiREM's KB-1) in a specific area to facilitate reductive dechlorination of chlorinated volatile organic compounds (VOCs) in shallow

groundwater at the site. The pilot study will be conducted by adding the carbon substrate solution and a bioaugmentation culture into an injection well through a temporary groundwater recirculation system, in the southwestern portion of the site. The temporary groundwater recirculation system is expected to facilitate the delivery of carbon substrate and the bioaugmentation culture.

CEMEX, the Discharger, may elect to continue and/or expand the pilot study across the entire site using the existing or new injection wells. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum to the DTSC for approval. If conducted, it is anticipated that carbon substrate solution and SiREM's KB-1 culture will be used as approved under a Site-Specific WDR. This Site-Specific WDR will cover the use of the carbon substrate amendments and SiREM's KB-1 culture.

In accordance with the California Environmental Quality Act (CEQA), the Regional Board has prepared an Initial Study for the adoption of waste discharge requirements to address the remediation of VOCs in shallow groundwater by the addition of carbon substrate amendments with chlorinated-ethene degrading consortium, referred to as KB-1, into shallow groundwater to facilitate the biodegradation of VOCs.

Surrounding land uses and setting (briefly describe the project's surroundings):

The estimated 1.1 acre Rho-Chem treatment, storage, and disposal facility is located approximately 1.5 miles north of the Los Angeles International Airport (LAX), and in a predominantly industrial and commercial area of Inglewood, California. The site vicinity is developed and is relatively void of natural, open, or unimproved land area.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

County of Los Angeles, Well Installation Division

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |

☐ Utilities/Service Systems

☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all the potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Samuel Unger, Executive Officer

Los Angeles Regional Water Quality Control Board

EVALUATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with the proposed project are provided below in a checklist format developed pursuant to the California Environmental Quality Act (CEQA) Guidelines. The checklist has been used to assess the significance or insignificance of each potential impact. Brief explanations of each conclusion are provided after the checklists. Mitigation measures, as required, are discussed below each checklist.

Impact classifications used in the checklist are defined as follows:

“Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an Environmental Impact Report (EIR) is required.

“Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from **“Potentially Significant Impact”** to a **“Less Than Significant Impact.”** The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

“Less Than Significant Impact” applies to an effect that would not be significantly adverse.

“No Impact” applies where the effect occurs without impact.

I. AESTHETICS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

- a) The site is located in an area designated as a light industrial area pursuant to the City of Inglewood Land Use Planning Map.
- b) The proposed project area is located within the footprint of an active industrial facility that is secured by fencing. The proposed injection and monitoring wells will be located below grade in an area of existing paving.
- c) The injection area will not be visible to adjacent streets or businesses.
- d) The project area is located within the footprint of an active industrial facility with existing lights. Therefore, the project will not require new lights to implement the pilot study.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to aesthetic resources, therefore no mitigation is required.

II. AGRICULTURAL RESOURCES

<i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

- a) The site is fully paved and it is located in an area designated as a light industrial on the City of Inglewood Land Use Planning Map. There is no agricultural use near the project site and the proposed project location is not located within an existing or proposed areas zoned for agricultural purposes.
- b) The project will not involve the conversion of farmland into non-agricultural use and will not conflict with existing agricultural use or the Williamson Act contract¹. There is no agricultural use near the project site and the proposed project location is not located within an existing or proposed areas zoned for agricultural purposes.
- c) There is no Farmland near the project site and the proposed project location is not located within existing or proposed areas zoned for agricultural purposes.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

¹ <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>: (January 12, 2011)

The California Land Conservation Act of 1965--commonly referred to as the Williamson Act--enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.

Mitigation Measures

The proposed project would not result in any impacts to agricultural resources. Therefore, no mitigation is required.

III. AIR QUALITY

<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

- a) The facility conducts normal operations under a South Coast Air Quality Management District (SCAQMD) permit and this project will not impact operations under this permit. The proposed project will not result in any impacts to air quality.
- b) The proposed project will not result in impacts to air quality because there will be no emissions to air.
- c) The proposed project is not anticipated to increase air emissions from the site or impact air quality because there will be no emissions to air.
- d) There are no sensitive receptors adjacent to the site. In addition, the project will not result in substantial emission of pollutants.
- e) The facility is an active industrial facility, which recycles waste solvents. The proposed project will not create objectionable odors or result in additional impacts to air quality.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to air quality, therefore no mitigation is required.

IV. BIOLOGICAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

- a) Impacts to biological resources are not expected as a result of project implementation because the facility is fully paved, the site vicinity is fully developed, and the surrounding region is void of natural, open, or unimproved areas. No runoff is expected from project activities.
- b) Impacts to biological resources are not expected as a result of project implementation because the facility is fully paved, the site vicinity is fully developed, and the surrounding region is void of natural, open, or unimproved areas. No runoff is expected from project activities.
- c) Geomatrix (2003)² assessed the local ecology through a search of the National Environmental Policy Act (NEPA) database files to identify threatened or endangered species, critical habitats areas, wetlands, and other habitat areas in the vicinity of the Rho-Chem facility. The results of the database search indicated that there are no designated wilderness areas, wildlife preserves, or

² Geomatrix, 2003, Current Conditions Report, Rho-Chem Facility, February 7.

potentially environmentally sensitive areas such as marshlands, wetlands, streams, forests, or oceans within a one-mile radius of the site. Impacts to biological resources are not expected as a result of project implementation because the facility is fully paved, the site vicinity is fully developed, and the surrounding region is void of natural, open, or unimproved areas. In addition, no runoff is expected from project activities.

- d) The facility is fully paved and surrounding region is thoroughly developed for industrial use.
- e) There are no trees at the facility in the proposed project area.
- f) No impacts to biological resources are expected as a result of project implementation because both the facility and surrounding region are developed thoroughly for industrial use.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impact to biological resources, therefore no mitigation is required.

V. CULTURAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

- a) There are no buildings or other structures at the facility that are listed as historical properties/buildings pursuant to Office of Historic Preservation.
- b) The site is not on the archeological resources list pursuant to electronic information provided through the California Native American Heritage Commission¹ and Office of Historic Preservation². The site lies within the ancestral lands of the Gabrielino/Tongva which stretch from Topanga Canyon in Los Angeles County through Aliso Creek in Orange County^{1,3}. The facility does not lie on or near any reported sites of sacred importance to the Gabrielenos³. In addition, the project is located in an area that underwent extensive underground disturbance during the removal of 30 or more underground tanks (USTs)⁴. Excavation work is not proposed as part of this project although injection and monitoring well drilling will occur. The drilling proposed for the project has little potential for inadvertent discovery since borings would be made through the existing concrete cover only affecting an aggregate surface area of less than three square feet (each boring would affect approximately 0.6 square feet). In the event of an inadvertent discovery of archaeological resource, project activities shall cease and a qualified professional archaeologist shall be retained to assess the discovery and make recommendations to the appropriate persons and property owner as to the significance of the finding.
- c) There are no known unique paleontological resources or sites or unique geologic feature identified at the site.
- d) No known unique ethnic cultural values or cultural/paleontological resources at the facility have been observed during site-visits by the DTSC project manager and other DTSC inspectors⁵. In addition, no cemeteries were found during the extensive excavations done as a part of the removal of the USTs at the site. It is not anticipated that this project will disturb any human remains, including those interred outside of former cemeteries. In the unlikely event of an inadvertent discovery of human remains, the project will cease activities in the immediate area and the county coroner will be contacted to assess the discovery. The appropriate authorities shall be contacted and the proper procedures shall be followed pursuant to Public Resources Code 5097.9.

Specific References:

1. California Native American Heritage Commission: <http://www.ceres.ca.gov/nahc.cr.html> [contact person is Rob Wood]
2. Office of Historic Preservation <http://ohp.parks.ca.gov>.
3. Gabrieleno/Tongva sacred sites <http://www.Tongva.com>
4. Underground Storage Tank Removal Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 13, 2003, Interim Measures Work Plan, GMX, January 31, 2000.

5. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to cultural resources, therefore no mitigation is required.

VI. GEOLOGY AND SOILS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides? 				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X

- a) The substrate and groundwater injection system will be located in a paved area of the site that is not occupied by a building. The surface topography of the facility is relatively level and groundwater is at a depth of 95 feet below ground surface (bgs). These conditions eliminate the potential for landslide and liquefaction issues. No fault is known to cross the site. Therefore, the project is unlikely to be affected by surface rupture. Strong seismic shaking is always a possibility in the Los Angeles basin, but the proposed project is unlikely to expose people or structures to loss, injury, etc., as a result of such shaking.
- b) The site is paved and no construction activities are proposed that would involve substantial or significant grading and or soil excavation work, therefore, no soil erosion or the loss of topsoil is expected.
- c) There will be no potential for project-related on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

- d) This question is not applicable to the current project because no structures are being built at the property as a result of the project.
- e) The facility is connected to an existing sewer and the proposed project will not require the use of septic tanks or alternative waste water disposal systems.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any geologic or soil impacts, therefore no mitigation is required.

VII. HAZARDS AND HAZARDOUS MATERIALS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

- a) No additional hazardous materials will be generated from this proposed project.
- b) The personnel who will implement the proposed project will be trained regarding potential safety and health risks associated with the activities as described in the site-specific and contractor specific Health and Safety Plans. Daily safety meetings will be held during the injection program and on-site monitoring. The health and safety training and monitoring plans will limit hazardous

material or waste discharged into the environment. Spill control methods will be available at the site in the event of a spill resulting from the injection process.

- c) There are no existing or proposed schools within 1/4 mile of the site.
- d) The proposed project is listed on in the Department of Toxic Substance Control (DTSC) Envirostor database (#80001571 and # CAD008364432). This project is under DTSC oversight and will not create a significant hazard to the public or the environment.
- e) The site is located within 1.5 miles of LAX. The project will not result in a safety hazard for people residing or working in the project area.
- f) There are no private air strips in the vicinity of the site.
- g) The proposed project is located on an active industrial facility, and should not impact or physically interfere with a local emergency response plan or emergency evacuation plan. Work conducted for this project will take into consideration Rho-Chem's existing emergency evacuation plans and procedures.
- h) The project area and site is located in an industrial area of Inglewood and is not expected to be affected by wildland fires.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003 (Pages 27-29)
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any hazards or hazardous materials impacts associated with the public, therefore no mitigation is required.

HYDROLOGY AND WATER QUALITY

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on- or offsite?				X
e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

- a) Bioaugmentation will increase the biomass in the treatment area, achieving effective biodegradation of dissolved and sorbed contaminants. The addition of carbon substrate amendments into the water table aquifer will stimulate bacteria growth ultimately resulting in reductive dechlorination of chlorinated volatile organic compounds (VOCs) and improving groundwater quality within and downgradient of the treatment area. The addition of the

amendments could result in an increase in concentrations of constituents that could affect water quality and beneficial uses. Those impacts are expected to be short term and confined to the area of the addition of the amendments.

- b) Groundwater will be extracted from an on-site downgradient water table well, treated in an above-ground treatment system, amended with carbon substrates and/or KB-1, and then re-injected in an on-site upgradient water table well. No depletion of groundwater supplies will result as part of the proposed project. In addition, there are no unpaved areas, or planned grading work or there is no grading diversion of surface water run-off from the facility proposed as part of this project. Therefore, the proposed project will have no effect on groundwater recharge.
- c) The facility is fully paved and the proposed project does not include any grading or alteration to the site pavement. There are no streams or rivers on site or adjacent to the site. Therefore, the proposed project will not substantially alter the existing drainage pattern of the site or area, or alter the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site.
- d) As noted above, the facility is paved and the project will not alter existing storm water run-off, existing site storm water controls, or result in on-site flooding.
- e) As noted above, the facility is paved and the project does not include any grading or alteration to the site pavement that would change existing site storm water conditions or controls.
- f) The proposed project is intended to provide an effective method for remediation of contaminated groundwater in the treatment area and is expected to improve groundwater quality over time.
- g) The equipment used for the pilot study will be temporary with no new permanent structures (except for a groundwater treatment unit), and there are no housing structures proposed as part of this project. Therefore, this project will not place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map..
- h) As noted above, no structures (except for a groundwater treatment unit) are being proposed as part of this project and therefore no structures will be built within a 100-year flood hazard area impede or redirect flood flows.
- i) The proposed project does not include construction of buildings or reliance on a levee or a dam. Neither levees nor dams exist within a several mile radius of the facility.
- j) The proposed project area is several miles inland and not subject to threat of tsunami. In addition, there are no adjoining surface water bodies, which can be affected by seiching. The facility is located in an area of flat terrain with no nearby source of material to sustain a mudflow.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Guidelines for Evaluating and Mitigating Seismic Hazards in California, Department of Conservations, Division of Mines and Geology, March 13, 1997
5. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project will be conducted pursuant to:

1. Pilot study work plan authorized by the California Department of Toxic Substance Control; “Pilot Study Work Plan for Evaluation of Enhanced In Situ Bioremediation of Volatile Organic Compounds in Groundwater”, dated August 9, 2010, prepared by AMEC Geomatrix, Inc., acknowledged by DTSC on December 27, 2010.

2. Site-Specific Waste Discharge Requirements Order issued by the Regional Board for the Enhanced In-Situ Bioremediation of Volatile Organic Compounds in Groundwater in the Rho-Chem Facility, and the associated Monitoring and Reporting Program .

A groundwater sampling and analysis program will be conducted prior to, during, and after the pilot study to closely monitor groundwater effects. Groundwater monitoring will be conducted from five on-site wells. Groundwater sample analysis will include (1) field parameters (e.g., temperature, conductivity, DO, and ORP), (2) VOCs, (3) electron donor parameters (e.g., total organic carbon [TOC]), (4) redox sensitive parameters (e.g., ferrous iron, sulfate, nitrate, manganese, and methane), (5) bioactivity parameters (e.g., TKN, ammonia, total phosphorus, alkalinity and pH), (6) bacterial DNA analysis by Phospholipid Fatty Acids (PLFA) analysis and Quantitative Polymerase Chain Reaction test (qPCR) to identify the amount of indigenous *dehalococcoides spp.* strains, and (7) dissolved metals (e.g., arsenic and other metals as needed).

Progressive changes in local groundwater quality will occur over a relatively short period of time, leading to an overall improvement of groundwater quality. The bacterial population added to promote complete reduction of PCE daughter products will only grow in the area where amendments (food source) are added. The spread of the bacterial population will be limited to anaerobic areas near and between the groundwater recirculation points during and from a period of time after amendment addition, and will be controlled by areas where the groundwater system is aerobic.

Control measures would be implemented if carbohydrate solution and *Dehalococcoides ethenogenes* (DHE) associated with the bioaugmentation culture were detected in monitoring points outside the treatment zone. These measures would involve stopping further addition of amendments to the groundwater. After this control measure has been implemented the remaining amendments in the groundwater will naturally break down, effectively removing food source and allowing the groundwater system to return to more aerobic conditions. The bioaugmentation culture (SiREM's KB-1™ culture) requires an electron donor/carbon source amendment (food), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive due to the loss of the food source and anaerobic conditions.

If the above mentioned control measure does not prevent the offsite migration of the carbohydrate solution and/or the bioaugmentation cultures, a contingency plan, involving the installation of a hydraulic containment system, will be implemented. The slow rate of groundwater flow within and down gradient of the pilot study areas allows for sufficient time to complete design, installation, and implementation of a hydraulic containment system if necessary.

VIII. LAND USE AND PLANNING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

- a) The proposed project will be located on an existing industrial facility, and it will not physically divide an established community.
- b) As noted above, the proposed project will be located on an existing industrial facility, and will not conflict with any applicable City land use plans or policy, or applicable plans or policies adopted by DTSC for this facility for the purpose of mitigating an environmental effect.
- c) As noted above the site is industrial, and the site will continue to be used for industrial purposes. Therefore the proposed project will not conflict with any applicable habitat conservation plan or natural community conservation plan.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Urban Water Management Plan, City of Inglewood, December 31, 1995
5. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to land use and planning, therefore no mitigation is required.

IX. MINERAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

- a) The site is located in an industrial area within the City of Inglewood. The site and the area surrounding the site are not used for the extraction of mineral resources, nor are they delineated on a local general plan, specific plan or other land use plans for mineral resource recovery for the City.
- b) As noted above, the site and surrounding area considered locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to mineral resources, therefore no mitigation is required.

X. NOISE

<i>Would the project result in:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

- a) The site is located in an industrial area within the City of Inglewood, and the area exhibits airport, commercial and vehicular noise. The project will be located on an active industrial facility that generates noise during operations. During the pilot study, periodic (short-term) noise may be generated by compressors or equipment used to extract, treat and mix the groundwater with the proposed substrate prior to reinjection. This equipment will be used periodically over the duration of the pilot study, and will not result in a permanent (long-term) increase in noise at the facility or generated noise in excess of the City of Inglewood's noise threshold.
- b) The drilling equipment use to install the injection and observation wells and the above-grade equipment used for the pilot study will not generate excessive groundborne vibrations or groundborne noise levels.
- c) The periodic short-term noise that may be generated during the pilot study will not result in a substantial or permanent increase in noise above the ambient levels at the facility or to the area surrounding the site. .
- d) The periodic short-term noise that may be generated during the pilot study will not result in a substantial temporary or periodic increase in noise above the ambient levels at the facility or to the area surrounding the site. .
- e) The site and surrounding area is industrial, and the proposed project will not expose people working in the project area to excessive noise levels.
- f) The site and project area is not located in the vicinity of a private air strip. .

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any significant noise impacts, therefore no mitigation is required.

XI. POPULATION AND HOUSING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

- a) The proposed project will not include the development of new homes, business, or infrastructure, and therefore it will not induce population growth in area, either directly or indirectly.
- b) As noted above, the project will not include the development of new homes, business, or infrastructure, and therefore it will not displace any existing housing, and will not necessitate construction of replacement housing elsewhere.
- c) As noted above, the project will not include the development of new homes, business, or infrastructure, and therefore it will not displace any people or necessitate construction of replacement housing elsewhere.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Urban Water Management Plan, City of Inglewood, December 31, 1995
5. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to population or housing, therefore no mitigation is required.

XII. PUBLIC SERVICES

<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

This proposed project will not result in any adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for any of the following public services, i.e., fire protection, police protection, schools, parks, and other public facilities.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts to public services, therefore no mitigation is required.

XIII. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

- a) The proposed project will not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of those facilities would occur or be accelerated.
- b) The proposed project will not include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project will not result in any recreation impacts, therefore no mitigation is required.

XIV. TRANSPORTATION AND TRAFFIC

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in the traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

- a) The proposed project will not substantially increase traffic in the site vicinity or result in traffic that may exceed the capacity of the street system.
- b) The proposed project will not exceed, either individually or cumulatively, a level of service standard established by the country congestion management agency for designated roads or highway.
- c) The proposed project will not result in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- d) The proposed project will not substantially increase hazards due to a design feature.
- e) The proposed project will not result in inadequate emergency access.
- f) The proposed project will not result in inadequate parking capacity.
- g) The proposed project will not conflict with adopted policies, plans, or programs supporting alternative transportation.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any significant transportation or traffic impacts, therefore no mitigation is required.

XV. UTILITIES AND SERVICE SYSTEMS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

- a) The project, as proposed, will not generate wastewater, and therefore wastewater will not exceed wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board.
- b) The project does not require the construction of a new wastewater treatment facility or require the expansion of the existing wastewater treatment facility.
- c) The proposed project will not require the construction of new storm water drainage facilities or the expansion of existing facilities.
- d) The proposed project will be conducted on an active industrial facility with an available public water supply and therefore the project will not require the issuance of entitlements and or obtaining alternative resources.
- e) The proposed project will not generate wastewater that will require off site treatment, and therefore this project will not need a determination of adequate capacity by the wastewater treatment provider which serves or may serve the project area.
- f) This proposed project will be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs (primary waste to be generated will be spent carbon).
- g) This proposed project will comply with federal, state, and local statutes and regulations related to solid waste.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006

Mitigation Measures

The proposed project would not result in any impacts related to utilities or service systems, therefore no mitigation is required.

XVI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)				X
c) Does the project have environmental effects which will cause substantially adverse effects on human beings, either directly or indirectly?				X

- a) There is no potential for the proposed project activities to have any of the described impacts. As discussed throughout this document, the proposed project would not result in any significant impacts to the quality of the environment, nor would it substantially affect biological resources and associated habitats or eliminate important examples of California history or prehistory.
- b) The proposed project activities will not have any “cumulatively considerable” impacts.
- c) The proposed project activities will not have any environmental effects that would indirectly or directly cause adverse effects on human beings. As indicated in this document, the proposed project is expected to result in positive benefits of improving groundwater quality.

Specific References

1. Current Condition Report, Rho-Chem Facility, Geomatrix Consultants, Inc. (GMX), February 7, 2003
2. Underground Storage Tank Removal Report, Rho-Chem Facility, GMX, February 13, 2003
3. Interim Measures Work Plan, GMX, January 31, 2000
4. Negative Declaration, Rho-Chem Interim Measures Work Plan – Soil Vapor Extraction System, DTSC, January 6, 2006